

inches of this amount fell during the 24 hours ending at 7 a. m. of the 17th.

The highest stage at Wausau was 8.4 feet on the afternoon of the 17th, the highest at Grand Rapids was 9.4 feet during the daylight hours of the 19th, and the highest stage at Portage was 10.9 feet throughout Sunday, the 22d.

#### A WORD AS TO FUTURE FLOODS.

The great floods of the past on the Wisconsin River will be duplicated in the future—but when, no one knows. Popular notions that the destruction of forests, the cultivation of the soil, etc., have materially altered climatic conditions are erroneous. As in the past, the floods of the future depend almost entirely upon the distribution and amount of precipitation.

Towns and cities in the Wisconsin Valley are growing in size and importance. Property subject to damage during floods is increasing enormously. Immense dams are converting portions of the river into great artificial lakes. These are among the reasons why localities that are subject to damage should guard against it by frequently inspecting and repairing levees, guard locks, etc., during periods of low water.

#### HIGH WATER FROM DUBUQUE TO LA CROSSE.

The rainfall at the headwaters of the Mississippi River was about the same as already stated for the upper Wisconsin Valley. For instance, the September rainfall at St. Paul was 5.27 inches, or 1.85 inches above the normal. This amount was followed by 5.58 inches during the first six days of October. Similar conditions also caused the severe floods on the Black River.

As the result of these conditions the Mississippi River from Dubuque to La Crosse was the highest since July, 1908. The rise was further increased from Dubuque to Prairie du Chien by the flood from the Wisconsin River, and also by a general rain from October 13 to 16, which gave from 2 to 3 inches from Prairie du Chien to north of La Crosse.

At Dubuque the river rose from 3.6 feet on the 2d to 14.6 feet on the 18th and 19th. This rise of 11 feet has never been equaled during any October since the station was established 38 years ago, although during two previous Octobers the maximum stage was higher.

The highest water was about 3 feet below flood stage both at La Crosse and Dubuque. Warnings of the approaching high water were nevertheless given through the newspapers and The Daily River Bulletin, marked copies of which were sent to postmasters.

Nearly every postmaster from Dubuque to below La Crosse reports damage to crops, particularly hay, which was cut and stacked, and the losses may reach \$100,000. Owing to a long period of low water, lasting several years, lowlands and islands were cultivated this year to an unusual extent, and this fact explains the heavy loss. The amount of crops saved after warnings were given probably exceeded the amount lost, but in many instances the heavy rains which preceded the floods for a number of days or weeks made it impossible for farmers to get into their fields.

From among the many letters received relative to the high water in the Mississippi River the following extracts are taken:

Postmaster Charles P. White, Stoddard, Wis.:

The damage by recent floods in this vicinity is wholly in bottom lands of the Mississippi. Estimated loss of hay, 3,000 to 4,000 tons, valued at about \$30,000. Quite an amount was saved by farmers having available flats to float their hay to shore.

#### Postmaster, Lansing, Iowa:

About 1,000 bushels of corn were saved; none was totally destroyed, but some was damaged to the extent of \$250. Two hundred tons of hay were destroyed; value, \$1,600.

#### Mr. M. O. Dulphy, Harpers Ferry, Iowa:

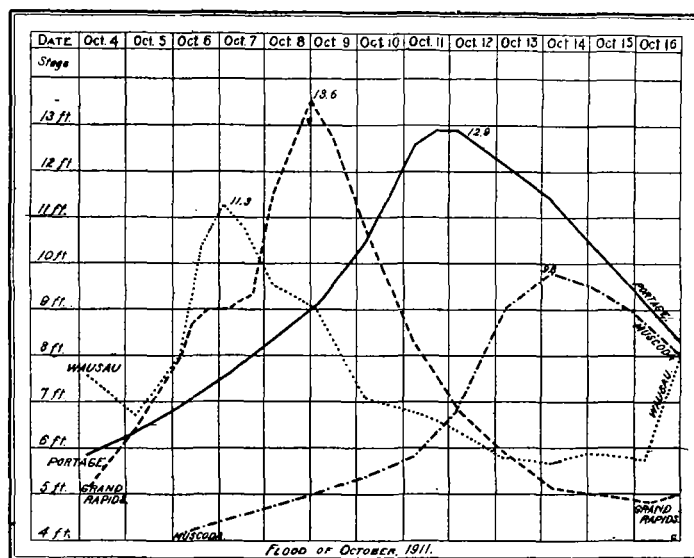
The loss to hay, corn, and potatoes in this vicinity amounted to about \$500. I had 50 head of cattle, 75 hogs, 100 tons of hay, and some other crops on the island, all of which I saved, as I used my River Bulletin as a guide.

#### Mr. J. A. Gillis, Prairie du Chien, Wis.:

The warnings were of great benefit. Farmers put large forces of men to work, and the greater portion of the crops was saved.

#### Postmaster Walter Kimball, Cassville, Wis.:

Losses in this vicinity: Six hundred tons of cabbages, value \$2,500; field corn destroyed, \$2,500; damaged, \$500; hay and sweet-corn fodder destroyed, \$1,000. If the farmers had taken better warning of your forecast the loss would not have been so heavy, but they could not believe the water would reach such a high stage. They now believe in the accuracy of your forecasts and will appreciate the service.



Wisconsin River Stages.

#### FLOOD REPORT.

By B. L. WALDRON, Official in Charge, Hannibal, Mo.

The excessive rains of September 25, 27, and 28, and October 1, following the frequent heavy rains that had fallen earlier in September, caused a flood in the North and South Fabius and in North and South Rivers that did a great amount of damage in the valleys of those rivers and in the Mississippi bottom lands across from Quincy, Ill.

The bottom lands were completely overflowed and the corn that was cut and in shock was either carried away or ruined, and that which was standing was injured. Thousands of tons of prairie hay was ruined as well as all the wheat that had been sown.

The levee at Taylor, Mo., was saved by great effort, all the men available working on it for two days and nights.

The O. K. Railroad lost about 100 feet of track just west of Taylor, Mo., and the Chicago, Burlington & Quincy had a weakened embankment near Moody or Dunsford, Mo., which caused them to detour trains for part of a day.

The damage to property except crops was probably \$500; the damage to crops was probably \$10,000. There was no special damage from erosion or deposit nor by suspension of business.